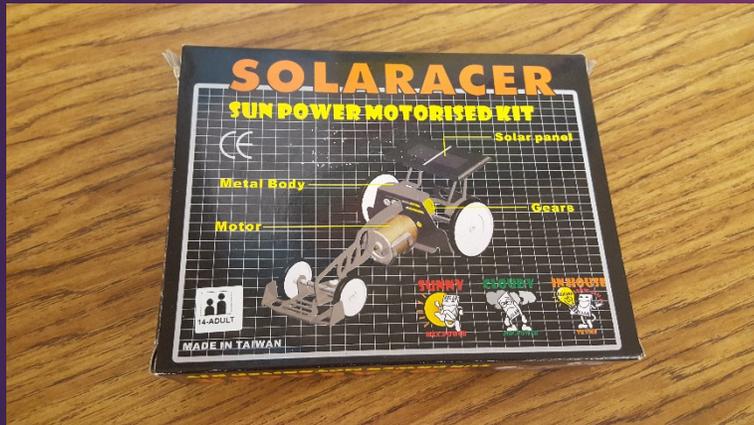
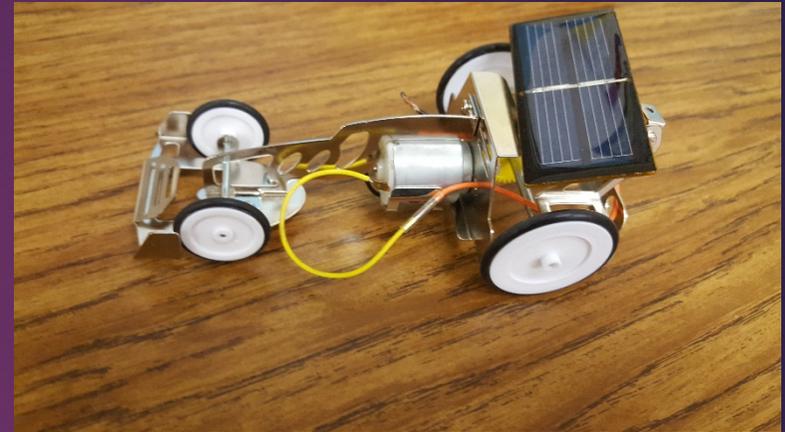


Ms. Joycetta Yazzie
Kayenta Unified School
6th Grade
Solar Race Car Activity
SY' 2016-2017



Title: Solar Car Races

Grade: 6th-8th

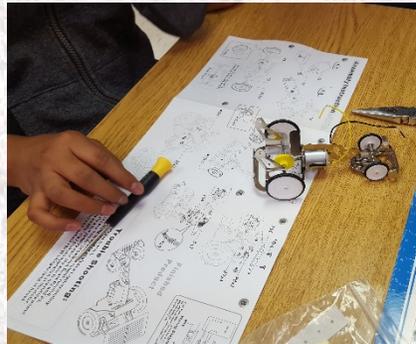
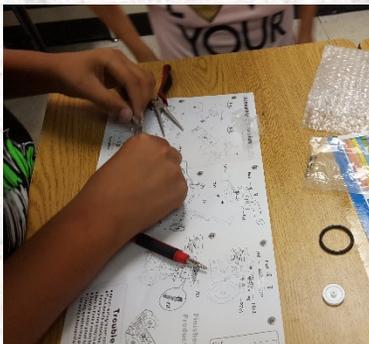
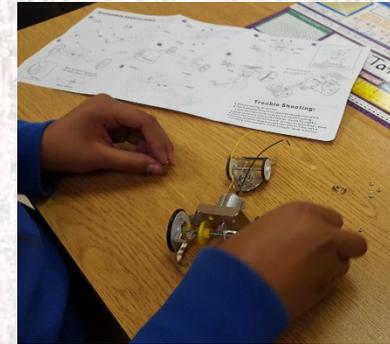
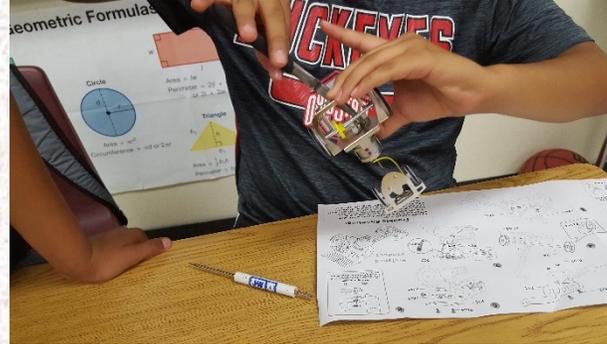
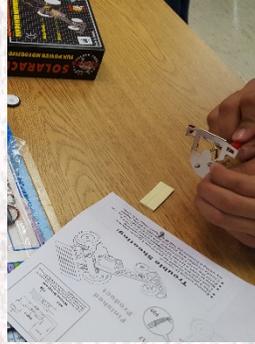
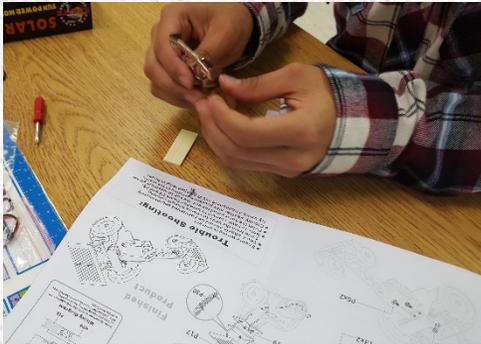
Author: Joycetta Yazzie

There is a global demand for energy which leads to a focus on sustainability. On the Navajo Reservation, located in parts of Arizona, New Mexico, and Utah, Native American tribes are becoming more interested in methods to sustain energy. The notion of teaching renewable resources to students can broaden their understanding towards different types of renewable energy, spreading the awareness of sustainability in energy generation and energy use.

On August 8 – 19, 2016 students in my class built their Solar Racer cars, tested, graphed results, and made their analysis.

1. Building

At the beginning of the school year, students constructed their manufactured solar cars, working in small groups



2. Testing

Students were EXCITED to see their Solar Racers working as they were being tested for the first time. They tested their solar cars on three different surfaces; asphalt, concrete, and dirt. Testing our solar cars on three different types of surfaces did not work out because the Solar Racer cars were starting to fall apart after testing them for three trials on the cement.

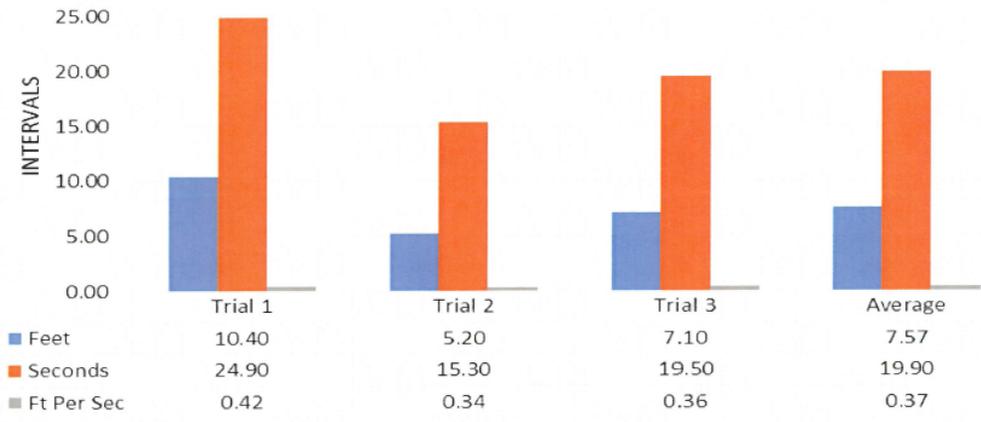


"CLOUDS, our nemesis"! As one student said.

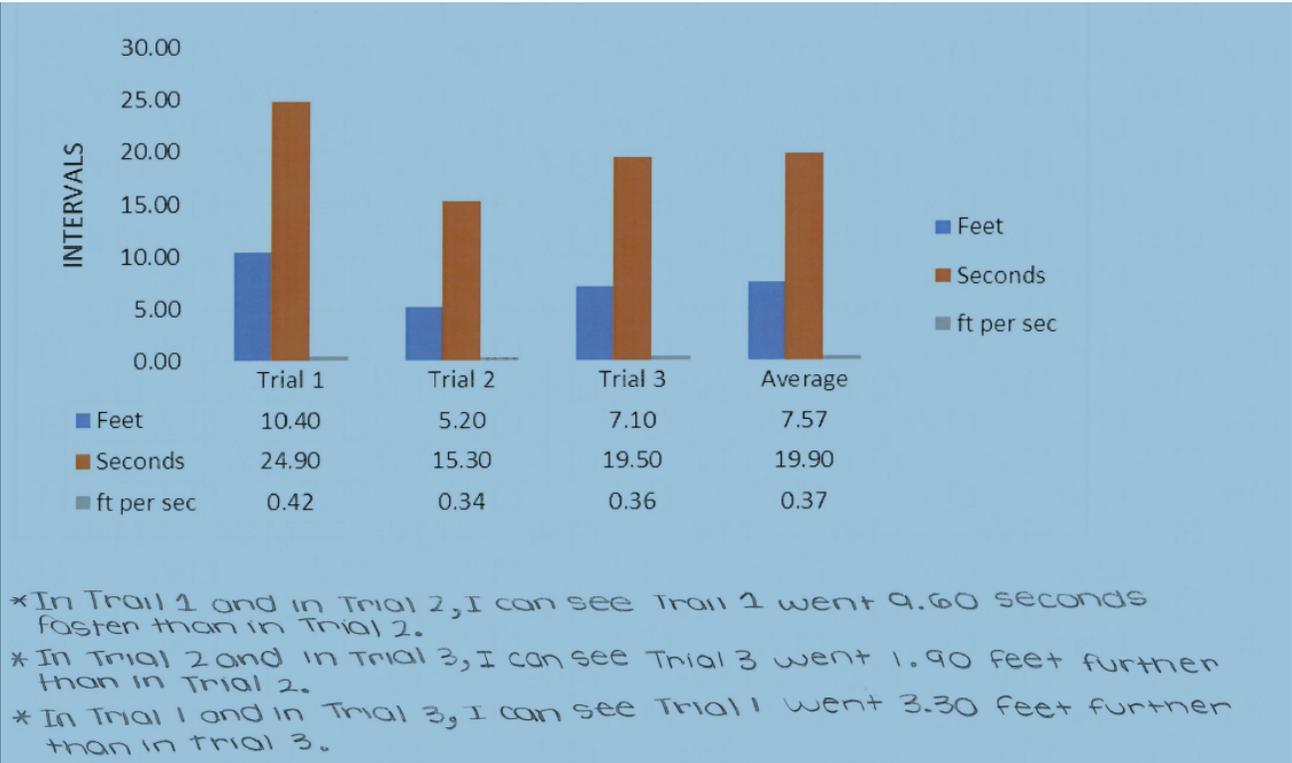
Students tested their Solar Racers on cement in three trials. They had to measure how far their solar car went in feet and in how many seconds.

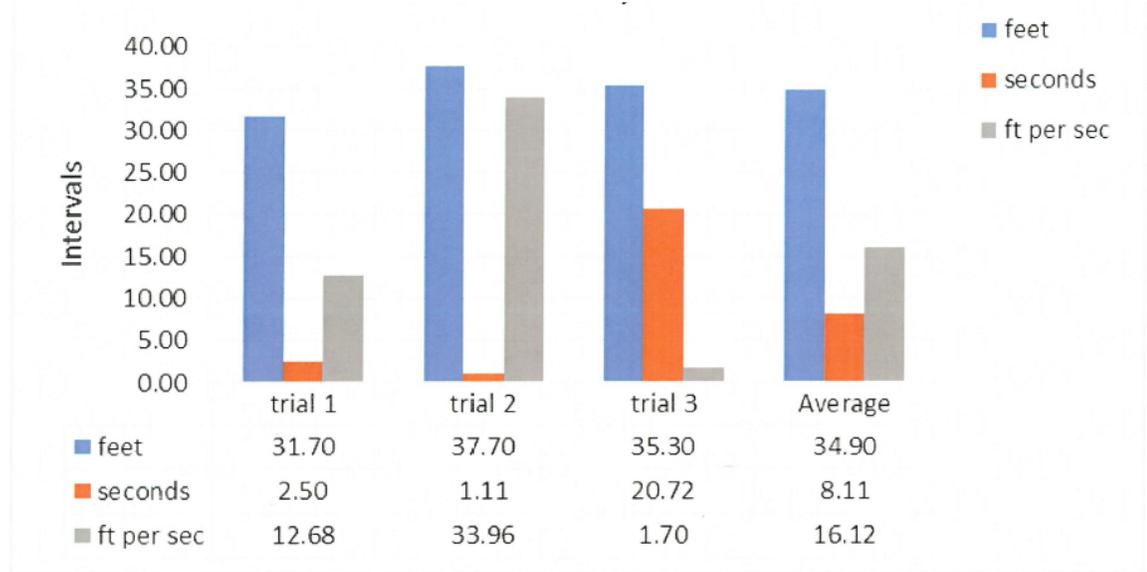
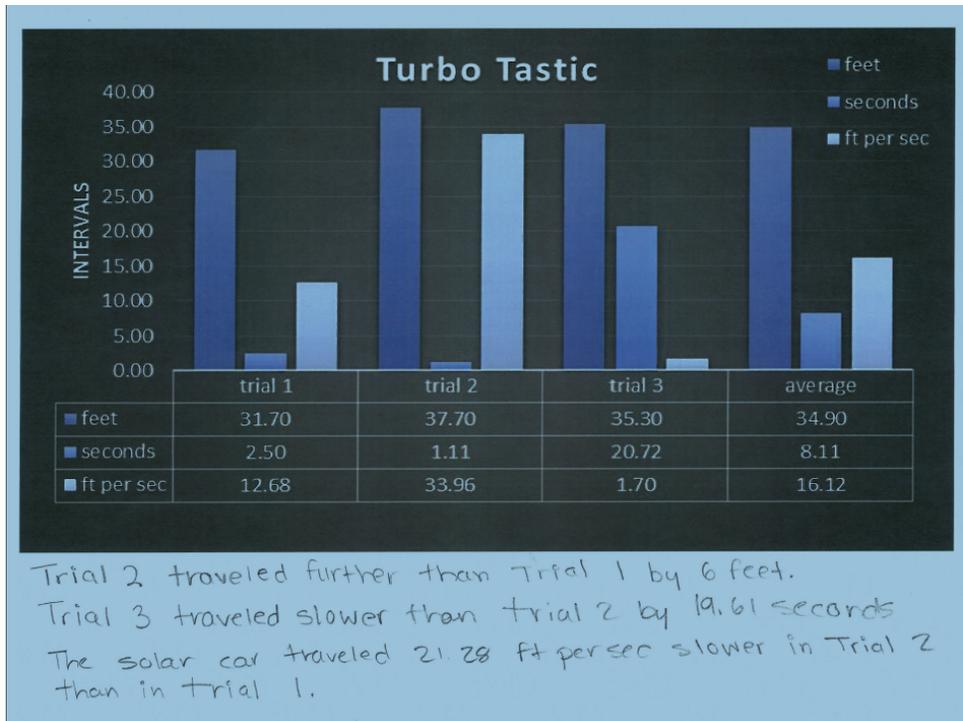


Students learned to collect and analyze data using a bar graph created in Excel. They compared their findings on a bar graph rather than a line graph because it was easier to compare the differences between feet, seconds, and feet per second.

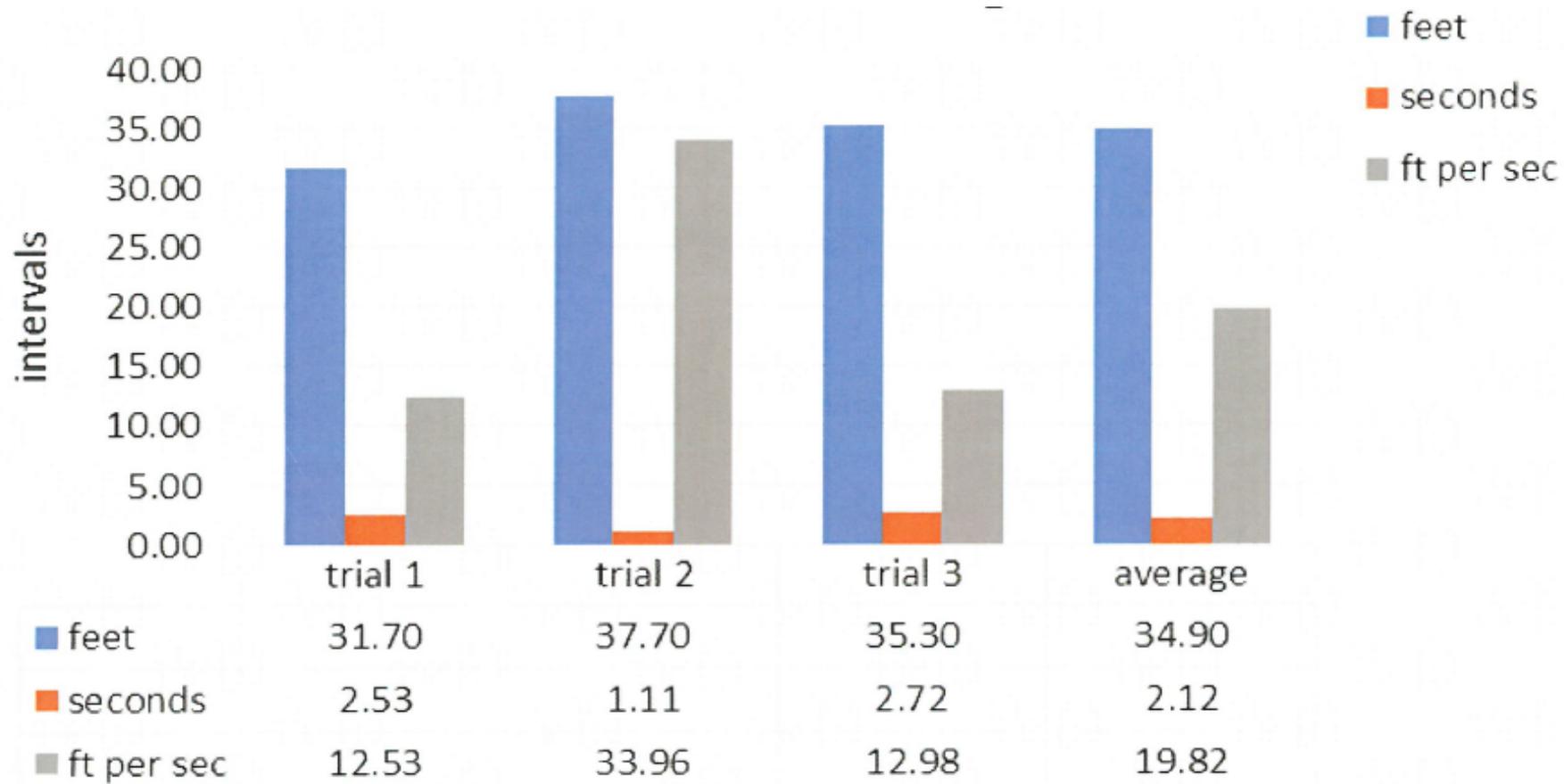


Trial 1 is 5.20 feet longer than Trial 2.
 Trial 3 is 5.40 seconds less than Trial 1.
 Trial 2 is 0.02 ft per sec less than Trial 3.





- 1.) The solar car traveled, 6 ft. farther than Trial 2 than in Trial 1.
- 2.) The difference between Trial 1 and Trial 2 is 1.39 seconds.
- 3.) The solar car traveled 21.28 ft. per sec. slower in Trial 2 than in Trial 1.



- 1) In trial 1 and in trial 2, trial two went 6.00 further further than trial 1.
- $$\begin{array}{r} 37.70 \\ - 31.70 \\ \hline 6.00 \end{array}$$
- 2) trial 3 traveled slower by 1.61 seconds than trial 2.
- $$\begin{array}{r} 2.72 \\ - 1.11 \\ \hline 1.61 \end{array}$$
- 3) trial 3 traveled slower by 0.45 ft per second than trial 1.
- $$\begin{array}{r} 12.98 \\ 12.53 \\ \hline 0.45 \end{array}$$



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